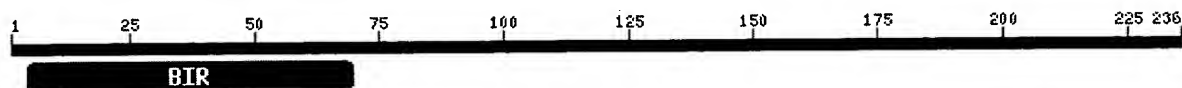


Query= [gi|16902898|gb|AAL30369.1|AF420440.1](#) testis-specific
inhibitor of apoptosis [Homo sapiens]
(236 letters)

Database: cdd.v.1.62

Click on boxes for multiple alignments



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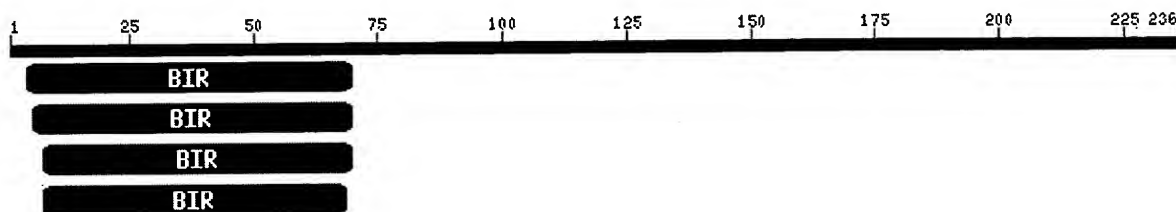
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RPS-BLAST 2.2.6 [Apr-09-2003]

Query= gi|16902898|gb|AAL30369.1|AF420440.1 testis-specific
inhibitor of apoptosis [Homo sapiens]
(236 letters)

Database: #cdd.v1.62
11,088 PSSMs; 2,717,223 total columns

Click on boxes for multiple alignments



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Domain Relatives

- .. This CD alignment includes 3D structure. To display structure, download [Cn3D!](#)

PSSMs producing significant alignments:

Score E
(bits) value

- gnl|CDD|14931 smart00238, BIR, Baculoviral inhibition of apoptosis protein r... [94.2](#) 1e-20
- gnl|CDD|17763 cd00022, BIR, Baculoviral inhibition of apoptosis protein repe... [92.6](#) 4e-20
- gnl|CDD|1211 pfam00653, BIR, Inhibitor of Apoptosis domain. BIR stands for ... [90.7](#) 1e-19
- gnl|CDD|3661 LOAD_bir, BIR, Zn binding domain involved in protein protein i... [88.0](#) 9e-19

- gnl|CDD|14931, smart00238, BIR, Baculoviral inhibition of apoptosis protein repeat; Domain found in inhibitor of apoptosis proteins (IAPs) and other proteins. Acts as a direct inhibitor of caspase enzymes.

CD-Length = 72 residues, 95.8% aligned
Score = 94.2 bits (234), Expect = 1e-20

Query: 4 YEARLITFGTWY--SVNKEQLARAGFYAIGQEDKVQCFHCGGLANWPKEDPWEQHAK 61
Sbjct: 3 EEARLKTFFQNWFPYNSKLTPEKLAKAGFYITGVGDEVKCFFCGGLDNWEPGDDPWEEHKK 62

Query: 62 WYPGCKYLL 70
Sbjct: 63 WSPNCPFVR 71

- gnl|CDD|17763, cd00022, BIR, Baculoviral inhibition of apoptosis protein repeat domain; Found in inhibitors of apoptosis proteins (IAPs) and other proteins. In higher eukaryotes, BIR domains inhibit apoptosis by acting as direct inhibitors of the caspase family of protease enzymes. In yeast, BIR domains are involved in regulating cytokinesis. This novel fold is stabilized by zinc tetrahedrally coordinated by one histidine and three cysteine residues and resembles a classical zinc finger.

CD-Length = 69 residues, 98.6% aligned
Score = 92.6 bits (230), Expect = 4e-20

Query: 5 EARLITFGTW--MYSVNKEQLARAGFYAIGQEDKVQCFHCGGLANWPKEDPWEQHAKW 62
Sbjct: 1 EARLKTFFKNWPISLKVTPPEKLAEAGFYITGRGDEVKCFFCGLELKNWEPGDDPWEEHKKRW 60

Query: 63 YPGCKYLL 70
Sbjct: 61 SPNCPFVL 68

● [gn||CDD|1211](#), pfam00653, BIR, Inhibitor of Apoptosis domain. BIR stands for 'Baculovirus Inhibitor of apoptosis protein Repeat' Also known as IAP repeat.

CD-Length = 66 residues, 100.0% aligned
Score = 90.7 bits (225), Expect = 1e-19

Query: 7 RLITFGTWMYSV--NKEQLARAGFYAIGQEDKVQCFHCGGGLANWKPEDPWEQHAKWYP 64
Sbjct: 1 RLRTFQNWPIISNLQFPEQLAKAGFYITGVGDEVRCFFCGVELKNWEPGDDPWEEHKRWSP 60

Query: 65 GCKYLL 70
Sbjct: 61 NCPFVR 66

● [gn||CDD|3661](#), LOAD_bir, BIR, Zn binding domain involved in protein protein interactions in caspase inhibition and spindle assembly.

CD-Length = 65 residues, 100.0% aligned
Score = 88.0 bits (218), Expect = 9e-19

Query: 7 RLITFGTWMYSVNK--EQLARAGFYAIGQEDKVQCFHCGGGLANWKPEDPWEQHAKWYP 64
Sbjct: 1 RLKTFQNWPAISNLVPEKLARAGFYITGRGDEVRCFFCGGVLKNWEPGDDPWEEHARWSP 60

Query: 65 GCKYL 69
Sbjct: 61 NCPFV 65

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CD: [smart00238.7](#), BIR, Query added

PSSM-Id: 14931

Source: [Smart](#)

Description: Baculoviral inhibition of apoptosis protein repeat; Domain found in inhibitor of apoptosis proteins (IAPs) and other proteins. Acts as a direct inhibitor of caspase enzymes.

Taxa: [root](#)

References: [60 Pubmed Links](#)

Related: [pfam00653](#), [cd00022](#), [LOAD_bir](#)

Status: Alignment from source

Created: 4-Feb-2003

Aligned: 30 rows

PSSM: 72 columns

Representative: Consensus

Proteins: [\[Click here for CDART summary of Proteins containing smart00238\]](#)

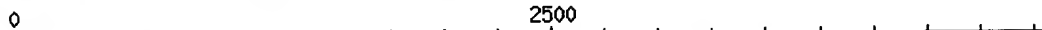
[View 3D Structure](#) with [Cn3D](#) using [Virtual Bonds](#) (To display structure, download [Cn3D](#))

[View Alignment](#) as [Hypertext](#) width [60](#) color at [2.0 bits](#)

[Subset Rows](#) [up to 10](#) sequences most similar to the query

	10	20	30	40	50	60
consensus*.....*.....*.....*.....*.....					
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1JD5 A	13 FLKDHRISTFKNWPFleGCACTPERMAEAGFIHCPTenePDLAQCFFCFKELEGWEPDDD 72					
1G73 D	24 AIETARLRTFEAWPRn-LKQK-PHQLAEAGFFYTGV---GDRVRCFCGGGLMDWNDNDE 78					
1I40 C	26 ADYEARIFTFTGTWYs-VNK---EQLARAGFYALGE---GDKVKCFHCGGGLTDWKPSD 78					
1QBH A	42 YSEEARLKSFQNWPD--YAHLPRELASAGLYYTGI---GDQVQCFCCGGKLNWEPKCDR 96					
qi 2497244	5 QTHAARMRTFMWPSs-VPVQ-PEQLASAGFYVGR---NDDVKCFCCDGGGLRCWESGDD 59					
qi 2497236	210 ACVDARLRTFTDWPIs-NIQP-ASALAQAGLYYQKI---GDQVRCFHCNIGLRWSQKEDE 264					
qi 2497236	27 SCELYRMSTYSTFPA--GVPVSERSLARAGFYITGV---NDKVKCFCCGLMLDNWKRGS 81					
qi 2497236	167 NNENARLLTFTQWTP---LTFLSPTDLAKAGFYIIGP---GDRVACFACGGKLSNWEPKDN 220					

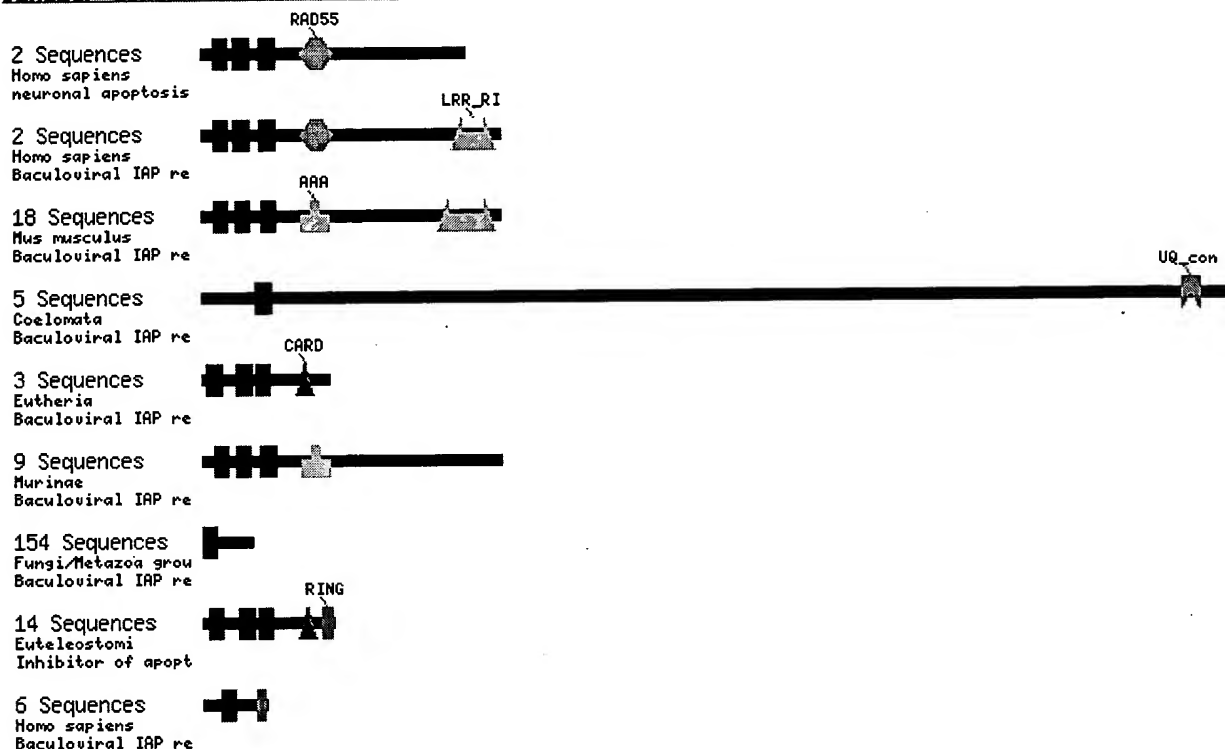
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1E31 B	55 PWEQHAKWYPGCKYLLe 71
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1G73 D	79 PWEQHAKWYPGCKYLLe 95
1I40 C	79 PWEQHAKWYPGCKYLLe 95
1QBH A	97 AWSEHRRHFPNCFVVLG 113
qi 2497244	60 PWVEHAKWFPFCEFLIR 76
qi 2497236	265 PWFEHAKWSPKQFVLL 281
qi 2497236	82 PTEKHKKLYPSCRFVQS 98
qi 2497236	221 AMSEHLRHFPCPFIEEN 237



Query










Similar domain architectures



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Subset by Taxonomy

Subset by selected domains:

- ☐  **COG0467** RecA-superfamily ATPases implicated in signal tra...
includes: [pfam00154](#) [pfam03796](#) [COG0305](#) [COG0468](#) [COG2874](#)
- ☐  **cd00162** RING-finger (Really Interesting New Gene) domain,...
includes: [smart00504](#) [smart00184](#) [COG5194](#) [pfam00097](#) [pfam04564](#)
- ☐  **smart00238** Baculoviral inhibition of apoptosis protein repea...
includes: [pfam00653](#) [LOAD_bir](#) [cd00022](#)
- ☐  **pfam00179** Ubiquitin-conjugating enzyme. Proteins destined f...
includes: [cd00195](#) [COG5078](#) [smart00212](#)
- ☐  **cd00116** Leucine-rich repeats (LRRs), ribonuclease inhibit...
includes: [COG5238](#)
- ☐  **pfam00619** Caspase recruitment domain. Motif contained in pr...
includes: [smart00114](#)
- ☐  **cd00009** AAA-superfamily of ATPases associated with a wide...
includes: [pfam01695](#) [cd00267](#) [pfam00158](#) [pfam03308](#) [smart00350](#) [pfam00308](#) [pfam01078](#) [pfam01495](#) [pfam03205](#) [smart0](#) [COG0396](#) [COG0410](#) [COG0411](#) [COG0444](#) [COG0470](#) [COG0523](#) [COG0541](#) [COG0552](#) [COG0714](#) [COG1101](#) [COG1117](#) [COG1118](#) [COG1119](#) [COG1120](#) [COG1121](#) [COG1122](#) [COG1124](#) [COG1125](#) [COG1126](#) [COG1127](#) [COG1134](#) [COG1135](#) [COG1136](#) [COG1137](#) [COG1221](#) [COG1222](#) [COG1223](#) [COG1466](#) [COG1474](#) [COG1485](#) [COG2842](#) [COG2884](#) [COG3172](#) [COG3267](#) [COG3283](#) [COG3604](#) [COG3638](#) [COG3839](#) [COG3840](#) [COG3842](#) [COG](#)



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☐ 1: AAO31297. Sequence 2 from p...[gi:28075569]

BLink, Links

LOCUS AAO31297 236 aa linear PAT 29-JAN-2003

DEFINITION Sequence 2 from patent US 6331412.

ACCESSION AAO31297

VERSION AAO31297.1 GI:28075569

DBSOURCE accession AAO31297.1

KEYWORDS

SOURCE Unknown.

ORGANISM Unknown.

Unclassified.

REFERENCE 1 (residues 1 to 236)

AUTHORS Korneluk, R.G. and Lagace, M.

TITLE Methods and compounds for modulating male fertility

JOURNAL Patent: US 6331412-A 2 18-DEC-2001;

FEATURES Location/Qualifiers

source 1..236

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 ☐ 1: AAL30369. testis-specific i...[gi:16902898]

BLink, Domains, Links

LOCUS AAL30369 236 aa linear PRI 11-NOV-2001
DEFINITION testis-specific inhibitor of apoptosis [Homo sapiens].
ACCESSION AAL30369
VERSION AAL30369.1 GI:16902898
DBSOURCE locus AF420440 accession AF420440.1
KEYWORDS .
SOURCE Homo sapiens (human)
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (residues 1 to 236)
AUTHORS Korneluk, R.G. and Lagace, M.C.
TITLE Genomic Organization of the X-linked Inhibitor of Apoptosis and
Identification of a Novel Testis-Specific Transcript
JOURNAL Unpublished
REFERENCE 2 (~~residues 1 to 236~~)
AUTHORS Korneluk, R.G. and Lagace, M.C.
TITLE Direct-Submission
JOURNAL Submitted (18-SEP-2001) Research Institute, Children's Hospital of
Eastern Ontario, 401 Smyth Rd., Ottawa, Ontario K1H 8L1, Canada
COMMENT Method: conceptual translation supplied by author.
FEATURES
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Protein 1..236
/product="testis-specific inhibitor of apoptosis"
CDS 1..236
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/note="similar to the third BIR domain and zinc finger of
BIRC4/XIAP"
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181 rrlqeeklck icmdryiavv fipcghlvtc kqcaeavdrc pmcsavidfk qrvfms
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1: AB013819. *Mus musculus* mRNA...[gi:3135206]

Links

```

LOCUS      AB013819                955 bp    mRNA    linear    ROD 25-FEB-1999
DEFINITION Mus musculus mRNA for TIAP, complete cds.
ACCESSION  AB013819
VERSION    AB013819.1  GI:3135206
KEYWORDS   TIAP.
SOURCE     Mus musculus (house mouse)
ORGANISM   Mus musculus

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REFERENCE	1 (sites)
AUTHORS	Kobayashi,K., Hatano,M., Otaki,M., Ogasawara,T. and Tokuhisa,T.
TITLE	Expression of a murine homologue of the inhibitor of apoptosis protein is related to cell proliferation
JOURNAL	Proc. Natl. Acad. Sci. U.S.A. 96 (4), 1457-1462 (1999)
MEDLINE	<u>99145571</u>
PUBMED	<u>9990045</u>
REFERENCE	2 (bases 1 to 955)
AUTHORS	Kobayashi,K., Otaki,M., Ogasawara,T. and Tokuhisa,T.
TITLE	Direct Submission
JOURNAL	Submitted (11-MAY-1998) Koichi Kobayashi, Chiba University Graduate School of Medicine, Department of Developmental Genetics; Inohana 1-8-1, Chuo-ku, Chiba 260-8670, Japan (E-mail:Kobayashi@devgen01.m.chiba-u.ac.jp, Tel:81-43-226-2182)

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BASE COUNT	230 a	227 c	265 g	233 t
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☐ 1: [smart00238](#)

Links

BIR: Baculoviral inhibition of apoptosis protein repeat; Domain found in inhibitor of apoptosis proteins (IAPs) and other proteins. Acts as a direct inhibitor of caspase enzymes. [smart00238|14931]

☐ 2: [pfam00653](#)

Links

BIR: Inhibitor of Apoptosis domain. BIR stands for 'Baculovirus Inhibitor of apoptosis protein Repeat' Also known as IAP repeat. [pfam00653|1211]

☐ 3: [cd00022](#)

Links

BIR: Baculoviral inhibition of apoptosis protein repeat domain; Found in inhibitors of apoptosis proteins (IAPs) and other proteins. In higher eukaryotes, BIR domains inhibit apoptosis by acting as direct inhibitors of the caspase family of protease enzymes. In yeast, BIR domains are involved in regulating cytokinesis. This novel fold is stabilized by zinc tetrahedrally coordinated by one histidine and three cysteine residues and resembles a classical zinc finger. [cd00022|17763]

☐ 4: [LOAD_bir](#)

Links

BIR: Zn binding domain involved in protein protein interactions in caspase inhibition and spindle assembly. [LOAD_bir|3661]

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1: AAL30369

testis-specific inhibitor of apoptosis [Homo sapiens]
gi|16902898|gb|AAL30369.1|AF420440_1[16902898]

BLink, Domains, Links



2: NP_203127

baculoviral IAP repeat-containing 8; IAP-like protein 2 [Homo sapiens]
gi|16974128|ref|NP_203127.2|[16974128]

BLink, Domains, Links



3: Q96P09

Baculoviral IAP repeat-containing protein 8 (Inhibitor of apoptosis-like protein 2) (IAP-like protein 2) (ILP-2)
(Testis-specific inhibitor of apoptosis)
gi|21759009|sp|Q96P09|BIR8_HUMAN[21759009]

BLink, Domains, Links



4: AAE55420

Sequence 4 from patent US 6159709
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BLink, Links



5: AAE57231

Sequence 4 from patent US 6171821
gi|14110691|gb|AAE57231.1|pat|US|6171821|4[14110691]

BLink, Links



6: AAO31297

Sequence 2 from patent US 6331412
gi|28075569|gb|AAO31297.1|pat|US|6331412|2[28075569]

BLink, Links



7: CAD26707

unnamed protein product [Homo sapiens]
gi|19168942|emb|CAD26707.1|[19168942]

BLink, Links



8: CAC37714

unnamed protein product [Homo sapiens]
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BLink, Links



9: AAK81892

IAP-like protein 2 [Homo sapiens]
gi|15042064|gb|AAK81892.1|AF164682_1[15042064]

BLink, Domains, Links



10: AAK49776

IAP-like protein 2 [Pan troglodytes]
gi|14522827|gb|AAK49776.1|[14522827]

BLink, Domains, Links



11: Q95M72

Baculoviral IAP repeat-containing protein 8 (Inhibitor of apoptosis-like protein 2) (IAP-like protein 2) (ILP-2)
gi|21759007|sp|Q95M72|BIR8_PANTR[21759007]

BLink, Domains, Links



12: CAC37715

unnamed protein product [Pan troglodytes]

BLink, Links